

What is claimed is

1. A method for continuously manufacturing an optical article which comprises a first step of thermal press-molding a sheet-like curved body and a  
5 second step of insert-molding a back resin on a concave side of the sheet-like curved body, while transferring a continuous sheet in a longitudinal direction, using an apparatus for manufacturing an optical article in which a press-molding machine which can thermal press-mold the sheet-like curved body and an insert injection-molding machine equipped with a mold having a curvature similar to that  
10 of the sheet-like curved body are serially positioned in this order, wherein a cycle of thermal press-molding and a cycle of insert injection-molding are synchronized to continuously insert injection-mold the back resin on a concave side of the sheet-like curved body while continuously thermal press-molding the sheet-like curved body.

15 2. The method according to claim 1, wherein the continuous sheet is a multi-layered sheet comprising two or more layers of sheets containing one layer of a polarizer sheet.

20 3. The method according to claim 2, wherein sheets of the continuous sheet other than the polarizer sheet include an attaching sheet of acylcellulose, polycarbonate, polyamide, polyester, and a hydrocarbon-series resin having a main chain containing at least one residue selected from the group consisting of an adamantane ring residue, a norbornene ring residue and a cyclopentane ring  
25 residue.

4. The method according to claim 2, wherein one of outermost attaching sheets of the continuous sheet, on which the back resin is insert injection-molded, is an attaching sheet of polycarbonate, polyamide, polyester, and a hydrocarbon-series resin having a main chain containing at least one residue selected from the  
30 group consisting of an adamantane ring residue, a norbornene ring residue and a

cyclopentane ring residue.

5. The method according to claim 1, wherein the back resin is polycarbonate, polyamide, polyester, and a hydrocarbon-series resin having a main chain  
5 containing at least one residue selected from the group consisting of an adamantane ring residue, a norbornene ring residue and a cyclopentane ring residue, and is thermally adherable with the sheet-like curved body.

6. The method according to claim 1, wherein the thermal press-molding machine  
10 comprises a planar support which has a hole having a size similar to that of the sheet-like curved body, a ring clamp which concentrically secures the continuous sheet on the support around the hole, and an anvil having a size and a curvature corresponding to those of the sheet-like curved body, wherein the anvil has a  
15 structure fittable in the support, and wherein the step of thermal press-molding the continuous sheet into the sheet-like curved body comprises a cycle of: stopping the feed of the continuous sheet; securing the continuous sheet on the support by the ring clamp; fitting the heated anvil in the hole of the support and thermal press-molding; returning the anvil and the ring clamp to the original positions; and feeding the continuous sheet.

7. The method according to claim 1, wherein the insert injection-molding  
machine comprises a front mold having a curvature similar to that of the sheet-like curved body and having a suction hole for adhering thereto the sheet-like curved body by suction and a movable mold having an optional curvature, and wherein  
25 the step of insert injection-molding the optical article comprises a cycle of: stopping the feed of the continuous sheet on which the sheet-like curved body is thermal press-molded; inserting the sheet-like curved body into the front mold; securing the sheet-like curved body to the front mold by suction; clamping the movable mold; injection-molding the back resin; removing the optical article; and  
30 feeding the continuous sheet.

8. The method according to claim 1, wherein the optical article is an optical lens.

9. The method according to claim 3, one of outermost attaching sheets of the continuous sheet, on which the back resin is insert injection-molded, is an attaching sheet of polycarbonate, polyamide, polyester, and a hydrocarbon-series resin having a main chain containing at least one residue selected from the group consisting of an adamantane ring residue, a norbornene ring residue and a cyclopentane ring residue.

10. The method according to claim 2, wherein the back resin is polycarbonate, polyamide, polyester, and a hydrocarbon-series resin having a main chain containing at least one residue selected from the group consisting of an adamantane ring residue, a norbornene ring residue and a cyclopentane ring residue, and is thermally adherable with the sheet-like curved body.

11. The method according to claim 3, wherein the back resin is polycarbonate, polyamide, polyester, and a hydrocarbon-series resin having a main chain containing at least one residue selected from the group consisting of an adamantane ring residue, a norbornene ring residue and a cyclopentane ring residue, and is thermally adherable with the sheet-like curved body.

12. The method according to claim 4, wherein the back resin is polycarbonate, polyamide, polyester, and a hydrocarbon-series resin having a main chain containing at least one residue selected from the group consisting of an adamantane ring residue, a norbornene ring residue and a cyclopentane ring residue, and is thermally adherable with the sheet-like curved body.

13. The method according to claim 2, wherein the thermal press-molding machine comprises a planar support which has a hole having a size similar to that

of the sheet-like curved body, a ring clamp which concentrically secures the continuous sheet on the support around the hole, and an anvil having a size and a curvature corresponding to those of the sheet-like curved body, wherein the anvil has a structure fittable in the support, and wherein the step of thermal press-molding the continuous sheet into the sheet-like curved body comprises a cycle of: stopping the feed of the continuous sheet; securing the continuous sheet on the support by the ring clamp; fitting the heated anvil in the hole of the support and thermal press-molding; returning the anvil and the ring clamp to the original positions; feeding the continuous sheet.

14. The method according to claim 3, wherein the thermal press-molding machine comprises a planar support which has a hole having a size similar to that of the sheet-like curved body, a ring clamp which concentrically secures the continuous sheet on the support around the hole, and an anvil having a size and a curvature corresponding to those of the sheet-like curved body, wherein the anvil has a structure fittable in the support, and wherein the step of thermal press-molding the continuous sheet into the sheet-like curved body comprises a cycle of: stopping the feed of the continuous sheet; securing the continuous sheet on the support by the ring clamp; fitting the heated anvil in the hole of the support and thermal press-molding; returning the anvil and the ring clamp to the original positions; feeding the continuous sheet.

15. The method according to claim 4, wherein the thermal press-molding machine comprises a planar support which has a hole having a size similar to that of the sheet-like curved body, a ring clamp which concentrically secures the continuous sheet on the support around the hole, and an anvil having a size and a curvature corresponding to those of the sheet-like curved body, wherein the anvil has a structure fittable in the support, and wherein the step of thermal press-molding the continuous sheet into the sheet-like curved body comprises a cycle of: stopping the feed of the continuous sheet; securing the continuous sheet on the

support by the ring clamp; fitting the heated anvil in the hole of the support and thermal press-molding; returning the anvil and the ring clamp to the original positions; and feeding the continuous sheet.

- 5 16 The method according to claim 5, wherein the thermal press-molding machine comprises a planar support which has a hole having a size similar to that of the sheet-like curved body, a ring clamp which concentrically secures the continuous sheet on the support around the hole, and an anvil having a size and a curvature corresponding to those of the sheet-like curved body, wherein the anvil  
10 has a structure fittable in the support, and wherein the step of thermal press-molding the continuous sheet into the sheet-like curved body comprises a cycle of: stopping the feed of the continuous sheet; securing the continuous sheet on the support by the ring clamp; fitting the heated anvil in the hole of the support and thermal press-molding; returning the anvil and the ring clamp to the original  
15 positions; and feeding the continuous sheet.

17. The method according to claim 2, wherein the insert injection-molding machine comprises a front mold having a curvature similar to that of the sheet-like  
20 curved body and having a suction hole for adhering thereto the sheet-like curved body by suction and a movable mold having an optional curvature, and wherein the step of insert injection-molding the optical article comprises a cycle of: stopping the feed of the continuous sheet on which the sheet-like curved body is thermal press-molded; inserting the sheet-like curved body into the front mold;  
25 securing the sheet-like curved body to the front mold by suction; clamping the movable mold; injection-molding the back resin; removing the optical article; and feeding the continuous sheet.

18. The method according to claim 3, wherein the insert injection-molding  
30 machine comprises a front mold having a curvature similar to that of the sheet-like curved body and having a suction hole for adhering thereto the sheet-like curved

body by suction and a movable mold having an optional curvature, and wherein the step of insert injection-molding the optical article comprises a cycle of: stopping the feed of the continuous sheet on which the sheet-like curved body is thermal press-molded; inserting the sheet-like curved body into the front mold; 5 securing the sheet-like curved body to the front mold by suction; clamping the movable mold; injection-molding the back resin; removing the optical article; feeding the continuous sheet.

19. The method according to claim 4, wherein the insert injection-molding machine comprises a front mold having a curvature similar to that of the sheet-like curved body and having a suction hole for adhering thereto the sheet-like curved body by suction and a movable mold having an optional curvature, and wherein the step of insert injection-molding the optical article comprises a cycle of: stopping the feed of the continuous sheet on which the sheet-like curved body is 15 thermal press-molded; inserting the sheet-like curved body into the front mold; securing the sheet-like curved body to the front mold by suction; clamping the movable mold; injection-molding the back resin; removing the optical article; and feeding the continuous sheet.

20. The method according to claim 5, wherein the insert injection-molding machine comprises a front mold having a curvature similar to that of the sheet-like curved body and having a suction hole for adhering thereto the sheet-like curved body by suction and a movable mold having an optional curvature, and wherein the step of insert injection-molding the optical article comprises a cycle of: 25 stopping the feed of the continuous sheet on which the sheet-like curved body is thermal press-molded; inserting the sheet-like curved body into the front mold; securing the sheet-like curved body to the front mold by suction; clamping the movable mold; injection-molding the back resin; removing the optical article; feeding the continuous sheet.